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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,426	04/27/2006	Toshio Matsumoto	P29832	4734
7055	7590	07/18/2007	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C.			VO, HAI	
1950 ROLAND CLARKE PLACE			ART UNIT	PAPER NUMBER
RESTON, VA 20191			1771	
NOTIFICATION DATE		DELIVERY MODE		
07/18/2007		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com  
pto@gbpatent.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/577,426	MATSUMOTO ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Hai Vo	1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### **Status**

1) Responsive to communication(s) filed on 18 June 2007.  
 2a) This action is **FINAL**.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### **Disposition of Claims**

4) Claim(s) 1,2,4-12 and 14 is/are pending in the application.  
 4a) Of the above claim(s) 9-12 and 14 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,2 and 4-8 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### **Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### **Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### **Attachment(s)**

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date 07/28/2006.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

***Election/Restrictions***

1. Applicant's election with traverse of Group I, claims 1, 2, and 4-8 in the reply filed on 06/18/2007 is acknowledged. The traversal is on the ground(s) that the examiner fails to make a proper showing that claim 1 is anticipated or obvious over JP 03-065579. This is not found persuasive because the claimed subject matter is actually disclosed in the JP'579 reference (see rejections below).

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, and 4-6 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 03-065579. JP'579 discloses a porous ceramic membrane comprising a calcium phosphate substrate having fine pores and a calcium phosphate coating on the substrate (pages 4 and 7). The coating contains 0.1 to 10% by weight of calcium phosphate having a

particle size of 100 nm or less and Ca/P ratio of 1.5 to 1.666. The calcium phosphate particles of the coating have the rod-like shape and dimensions within the range disclosed in the specification of the present invention (page 9). The coating has an average thickness of 2  $\mu$ m, which is within the claimed range (page 10). The porous ceramic membrane has pores with an average pore diameter ranging from 200 to 500 nm (page 10), which reads on Applicants' an average diameter of the openings. The porous membrane is useful as an absorbent (page 11). Likewise, at least some of the pores of the coating are communicated with the pores of the substrate for successful absorption. It appears that JP'579 uses the same materials and the same technique to form the porous ceramic membrane as Applicants. The calcium phosphate slurry is applied to the porous calcium phosphate substrate. The slurry is then defoamed under reduced pressure and the coated substrate is fired at 700°C to 1400°C (pages 7 and 8). The slurry contains rod shaped calcium phosphate particles having the dimensions within the range disclosed in the present specification. Therefore, it is the examiner's position that the coating would be inherently formed on 5 to 100% of the wall surfaces of the fine pores of the porous substrate. Accordingly, JP'579 anticipates or strongly suggests the claimed subject matter.

5. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 03-065579 as applied to claim 1 above, and further in view of JP 2003-073182. JP'579 is silent as to the substrate having a porosity of 40 to 98%. JP'182, however, teaches a porous calcium phosphate substrate as a bone substitute material having

a porosity of 5 to 50% and a Ca/P ratio ranging from 1.5 to 1.7 (paragraphs 13 and 15). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the porous calcium phosphate substrate having a porosity as taught by JP'182 motivated by the desire to porous ceramic membrane with sufficient strength. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the porous calcium phosphate substrate having a Ca/P ratio as taught by JP'182 motivated by the desire to produce the substrate having desired amount of hydroxyapatite having excellent biocompatibility for use as a bone substitute material.

***Double Patenting***

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1, 2, and 4-6 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, and 3-5 of copending Application No. 10/996,434. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the '434 application fully encompass the claimed subject matter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

8. Claims 7 and 8 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, and 3-5 of copending Application No. 10/996,434 in view of JP 2003-073182. The '434 application is silent as to the support portion having a porosity of 40 to 98%. JP'182, however, teaches a porous calcium phosphate substrate for bone supplementation, catalyst support, having a porosity of 5 to 50% and a Ca/P ratio ranging from 1.5 to 1.7 (paragraphs 13 and 15). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the support portion having a porosity as taught by JP'182 motivated by the desire to porous ceramic material with sufficient strength. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the support portion having a Ca/P ratio as taught by JP'182 motivated by the desire to produce the support portion having desired amount of hydroxyapatite having excellent biocompatibility for use as a bone substitute material.

This is a provisional obviousness-type double patenting rejection.

***Contact Information***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on Monday through Thursday, from 9:00 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HV  
Date: July 5, 2007

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